

REMARKS

Claims 1-5, 9 and 10 are rejected, and claims 6-8 are objected to as being allowable if rewritten in independent form.

Claims 1-10, and specifically claims 1, 4 and 5, were rejected under 35 U.S.C. § 112, second paragraph. Particularly, the Examiner considered the language "a side chain has at least 3 carbon atoms" to be ambiguous and depending upon the intended meaning, possibly conflicting with claims 4 and 5.

In response, claim 1 has been amended to more clearly recite that R¹ includes a main chain having at least 5 carbon atoms and three or more side chains (page 2, lines 27-29 of the specification and original claim 2) having a total of at least 3 carbon atoms in all side chains. The confusion was due to a translation error from the Japanese language PCT application where the singular form and plural form of a noun are generally the same. Claims 2, 4 and 5 have been amended to recite that each side chain is either an alkyl group, an alkyl group having 1 to 3 carbon atoms, or a methyl group. Support is found, for example, bridging page 6-7 of the specification. Claim 2 has been amended to conform to the amendment to claim 1 (incorporating a portion of the recitation of claim 2).

It is believed that the claims are now clear in scope, and withdrawal of the foregoing rejection is respectfully requested.

Claims 1-5, 9 and 10 were rejected under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent 6,610,775 to Oharu et al. The Examiner considered Oharu et al as disclosing an aqueous water-and oil-repellant dispersion

substantially as claimed, including (A) a copolymer comprising a polymerizable compound having a perfluoro alkyl or perfluoro alkenyl group and an acrylate or methacrylate group, and (B) a surfactant comprising a cationic surfactant (col. 12, line 34 - col. 13, line 15) and a compound of Formula 5 having the structure shown at col. 9, lines 50-52 said to overlap in scope with the claimed nonionic surfactant represented by formula (I).

Applicant traverses, and respectfully requests the Examiner to reconsider for the following reasons.

In the surfactant (b¹) of Oharu et al, preferably represented by Formula 5 at col. 9, lines 50-52, R¹⁰ may be an alkyl or alkenyl group having a carbon number of from 4 to 26, or the alkyl group or alkenyl group can have a linear structure or a branched structure (col. 9, lines 22-26). In the case of a branched structure, a secondary alkyl group or a secondary alkenyl group is preferred (col. 9, lines 26-28).

The Examiner considered that the above passage of Oharu is seen to "anticipate or render obvious the limitation of the branched structure to methyl groups and incorporating three or more branches as instantly claimed." The reason for rejection was that one of ordinary skill would "readily appreciate the teaching and be able to at once envisage the branch structure to methyl groups and employ 3 or more branches in the nonionic surfactant within the general formula."

However, the non-ionic surfactant shown at col. 10, line 5 has branched R¹⁰ having a single side chain C₆H₁₃- different from R¹ of the surfactant of Formula (I) of present claim 1 having three or more side chains. Formula 10 at col. 10, lines 55-60 shows a branch structure, also different from the non-ionic surfactant of formula (I) of claim 1.

Other than the above two non-ionic surfactants, there are no other concrete examples of a branch structure shown in Oharu et al.

Formula 5 of Oharu et al. has a very broad definition, whereas present claim 1 limits R^{10} of Formula 5 to specific surfactants. Regarding this last point, Applicant respectfully disputes the Examiner's assertion that one of ordinary skill would "at once envisage" the specific branch structure required by the present claims. Particularly, there is nothing in Oharu et al which would lead one of ordinary skill to select a non-ionic surfactant within the scope of formula (I) of claim 1. For example, R^1 requires at least three side chains, whereas the description of "secondary alkyl group" in Oharu et al. teaches no more than a single side chain, and there is nothing in Oharu et al which teaches or suggests the desirability of increasing the number side chains to at least 3 as required by the present claims.

In summary, one of ordinary skill cannot easily conceive the definition of R^1 of present claim 1 upon any kind of reading of Oharu et al.

In the event that the Examiner believes that it may be helpful to advance the prosecution of this application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 10/502,014

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Respectfully submitted,



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